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APPLICATION FOR
UNITED STATES LETTER PATENT
SPECIFICATION

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TO ALL WHOM IT MAY CONCERN:

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Be it known that I, Mark R. Godsil, a citizen of the United States, and resident of the United States of America, having a postal address of 605 Knollcrest Dr., Galesburg, IL 61401 have invented new and useful "Wire or Rod Jump Cups", of which the following forms the specification.

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WIRE OR ROD JUMP CUPS

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CROSS REFERENCE TO RELATED APPLICATIONS

Not applicable.

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STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable.

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REFERENCE TO MICROFICHE APPENDIX

Not applicable.

AUTHORIZATION PURSUANT TO 37 C.F.R. § 1.71(d)(e)

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BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates generally to an animal agility jump device. More particularly the present invention relates to jump cups for dog agility jumps, equine jumping competition, human high-jump stands and the like.

Background Art

Agility contests, with humans and with animals, have been carried out down through history all around the world. Jumping is a natural part of such contests. Humans race, jumping hurdles, horses are raced and shown in jumping competition, and dogs are also tested on their agility using a variety of jumps.

Jumps always comprise some kind of a standard. Necessarily, most standards are portable. To each standard is affixed a bar over which a person or animal jumps. On present day jumps, the bars are often placed on pins passed through holes in the standards, or in jump cups made of plastic. In either case, the standard must be fitted with a plurality of holes at an appropriate spacing for the pins or cups to be affixed at various heights. Multiple pins may be used in each standard, each affixed rigidly to the standard. Only one cup is used for each bar held by a standard.

The pin-method of supporting the jump bar can provide less than adequate stability if the ground conditions are not perfect. Height changes using cups tend to be tedious.

A difficulty arises when the rules to which the standards were constructed change. This may require new standards, irrespective of whether pins or cups are used to support the jump bars.

Prior designs have been made from other solid metals or solid plastics and do not use wire. On previous designs individual jump cups were attached to the jump uprights permanently, or by using hardware, or were made from solid cast aluminum.

There is a need for apparatus which can be attached to nearly any material/surface or be fabricated into a complete hinged wire jump frame.

There is a need for apparatus which can readily be adjusted in manufacturing to

meet specific height requirements or spacing of different sanctioning bodies.

There is a need for apparatus which can readily be adjusted in manufacturing for use in other jumping sports from human to equestrian; differing heights, widths, and bar sizes can easily be accommodated.

5 There is a need for apparatus which can also be used for solid type jumps when the “boards” are made with round hanging pins on each end.

There is a need for apparatus which can be manufactured using stainless steel wire eliminating need for painting or powder-coating.

10 There is therefore a need for a bar support system providing appropriately spaced locations for the bar, rapid, simple changes of heights, while not requiring the replacement of the standards when rules change.

BRIEF SUMMARY OF THE INVENTION

15 The present invention discloses a jump cup, formed from wire and ganged into sets for mounting on standards.

An advantage of the present invention is a plurality of pre-spaced jump cups on which a jump bar may rest.

20 Another advantage is these jump cups are fabricated from metallic round stock such as wire or rod stock and are mounted to the standards using standardized mounting holes. If regulations or requirements change, only the wire jump cups need be altered. The standards are reusable.

25 Each cup is made of a wire or rod stock bent in an arcuate shape, the arc being held in a substantially vertical plane when mounted on the standard. A tangent line to the center of the arc is substantially horizontal. The concave side of the cup holds the jump bar, but permits the bar to be knocked off the cup when hit with adequate force. At each end of the arc, the wire or rod stock is bent so that each wire lies in a second plane perpendicular with the plane in which the arc lies, which second plane is held substantially horizontal when the cup is mounted on a standard. This provides clearance
30 from the standard. A plurality of these wire cups are attached to parallel wires or rod

stock of appropriate length. Some methods of attaching the cups to the parallel wires or rod stock include welding, spot welding and brazing. Extra lengths of wire or rod stock, bent parallel to the parallel wires may be included for secure attaching. Affixing straps are also attached to the assembly, providing a way to fasten the assembly to a standard.

5 A plurality of these assemblies may be assembled using wire or rod stock for structure and attachment methods as above. An advantage can be realized by configuring the multiple assemblies in predetermined patterns and angles, alleviating the need to construct complicated jumps from multiple separate standards in the field.

10 Other objects, advantages and novel features of the present invention will become apparent from the following detailed description of the invention when considered in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

15 **Fig. 1a** is a front elevation view of a jump cup assembly of the present invention;

Fig. 1b is a side elevation view of the jump cup assembly;

Fig. 1c is a side elevation view of a single jump cup;

Fig. 1d is a front elevation view of the jump cup with a jump bar shown in dashed lines;

20 **Fig. 2a** is a perspective view of the jump cup assembly;

Fig. 2b is a perspective view of a single jump cup;

Fig. 3 is a perspective view of the jump cup assemblies, jump standards, and jump bars arranged as in a competition;

25 **Fig. 4** is a front elevation view of a set of three jump cup assemblies arranged in a first jump cup frame;

Fig. 5 is a perspective view of a set of three jump cup assemblies arranged in the first jump cup frame; and

Fig. 6 is a front elevation view of a set of three jump cup assemblies arranged in a second jump cup frame.

DETAILED DESCRIPTION OF THE INVENTION

An assembly **100** of jump cups **110** of the present invention is illustrated in **Figs. 1a, 1b, and 2a**. In the preferred embodiment, metallic round stock, such as wire or rod stock, is used to construct the jump cups **110** as well as the parallel members **120** used to mount the jump cups **110** at predetermined intervals, h **130**. The metallic material may be mild steel, aluminum, or stainless steel. It may be painted or powder coated as desired. The jump cup assembly **100** is mounted by fasteners passed through a hole in each of the mounting straps **140**. Appropriate fasteners include screws, bolts, nails, and rivets.

A single jump cup **110** is shown from the side in **Fig. 1c**, from the front in **Fig. 1d**, and in profile in **Fig. 2b**. A jump bar **150** is indicated by dashed lines in **Fig. 1d**. The arcuate shape in the front of the jump cup is made to hold the jump bar **150** securely, yet to permit it to be knocked off with an appropriate force. Therefore, the depth, ℓ **160**, can be a critical parameter. For AKC competitions, as an example, an appropriate depth, ℓ **160**, is one seventh of the jump bar diameter, d **170**.

Some jump assemblies **300–302** are shown in **Fig. 3**. A single-bar jump assembly **300** comprises two simple jump cup assemblies **100**, one on each standard **310**.

Four jump bars **150** are shown in use in the second jump assembly **301**. A first jump cup frame **330** is mounted on each of two standards **340**. Details of this first jump cup frame **330** are shown in **Figs. 4 and 5**. A structural frame **410**, in this case substantially rectangular in shape, is used to mount three jump cup assemblies, **100, 400, 401**. As is clearly evident from the illustration, two jump cup assemblies **400, 401** are canted at an angle relative to a substantially vertical jump cup assembly **100**. As a consequence of the angle, the jump cups **430, 440** of the canted jump cup assemblies **400, 401** are constructed such that the ends of the arcuate portion of the jump cups **430, 440** remain on a substantially horizontal line.

The configuration shown in **Figs. 4 and 5** is useful for common canine competitions, but the present invention is not limited to this or any other specific

configuration of jump cup assemblies. Each jump cup frame **330** is mounted to a standard **340** via the mounting straps **140** on the vertical jump cup assembly **100** and mounting tabs **420** affixed to the structural frame **410**.

A second style of jump cup frame **350** is shown attached to its standard **360** in **Fig. 3**; wherein three jump bars **150** are being utilized. It is also shown in elevation in **Fig. 6**. Again, this invention is not limited to this configuration.

In **Fig. 6**, a substantially vertical jump cup assembly **100** is one of three jump cup assemblies shown. The two other jump cup assemblies **600**, **601** are angled relative to the vertical jump cup assembly **100**. As a consequence of the angle, the jump cups **630**, **640** of the canted jump cup assemblies **600**, **601** are constructed such that the ends of the arcuate portion of the jump cups **630**, **640** remain on a substantially horizontal line. The structure and shape of the jump cup frame **350** is made by a structural frame **610**. Attachment to the jump standards **360** is made via mounting straps **140** on the vertical jump cup assembly **100** and mounting tabs **620** affixed to the structural frame **610**.

The industrial applicability of the jump cup invention is believed to be apparent from the foregoing description. More specifically, the jump cup can be attached to nearly any material/surface or be fabricated into a complete hinged wire jump frame. The jump cup also can readily be adjusted in manufacturing to meet specific height requirements or spacing of different sanctioning bodies. The jump cup further can readily be adjusted in manufacturing for use in other jumping sports from human to equestrian; differing heights, widths, and bar sizes can easily be accommodated. The jump cup can also be used for solid type jumps when the “boards” are made with round hanging pins on each end. The jump cup can be manufactured using stainless steel wire eliminating any need for painting or powder-coating.

Prior designs have been made from other solid metals or solid plastics and do not use wire. On previous designs individual jump cups were attached to the jump uprights permanently, or by using hardware, or were made from solid cast aluminum. The jump cup invention greatly improves on all prior designs and materials. Instead of attaching each cup individually to the jump, the jump cup assemblies already contain

all necessary jump cups for an entire single, double or triple jump.

The above embodiment is the preferred embodiment, but this invention is not limited thereto. It is, therefore, apparent that many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.